Departmental Audit and Evaluation Branch
Corporate Services
Department of Indian Affairs and Northern Development

March 13, 1997

Program Evaluation of the Environmental Issues Inventory and Remediation Plan (EIIRP)

Project 95/08

Table of Contents

Page

Executive Summary i
- Evaluation Objective and Scope i
- Background i
- Main Findings and Conclusions ii
- Recommendations iii
- Organization of Evaluation Report vii

Section 1 - Objective and Scope of the Evaluation 1
- Logic Model 2
- Program Components 2

Section 2 - Environmental Issues Inventory and Remediation Plan 6
- Background 6
- EIIRP Process and Activities 7
- EIIRP Organization and Delivery 9
- Organization Chart 10
- Stakeholders 12
- IEPP Program Budget 13
- EIIRP Funding Allocations 14
- Funding History 15
- Program Indicators 16
- Types of Contamination 17

Section 3 - Observations and Recommendations 18
- Profile 18
- Effectiveness 21
- Vulnerability 22
- Impact 24
- Rationale 24
- Improvements 26

Appendix I - Quebec Case Study 28

Appendix II - British Columbia Case Study 32

Appendix III - Other Materials 36
- A : Glossary of Abbreviations 36
- B : Relevant Legislation, Regulations, and Guidelines 37
- C : Documents Cited 38
- D : Evaluation Questionnaire 39

Terms of Reference and Action Plan

101-01127/

Executive Summary

Evaluation Objective and Scope

The objective of this evaluation is to examine the rationale, effectiveness, and impacts of the Indian Environmental Partnership Program (IEPP) and to identify areas for possible improvement. The IEPP is made up of two main components, namely, the Environmental Issues Inventory and Remediation Plan (EIIRP) and the Indian Environmental Assistance Fund (IEAF). The IEPP was approved by Cabinet on June 1, 1993 and received Treasury Board approval as part of the Supplementary Estimates of 1993-1994.

The scope of this evaluation is to focus only on the EIIRP component of the IEPP including areas for improvement, its contribution in terms of meeting the department's "due diligence" requirements, and its overall impact since its inception and implementation. (The IEAF will be the subject of a separate evaluation.)

Background

The EIIRP is a multi-phased initiative which sought to identify and document environmental problems on over 800 inhabited reserves across the country. It began in June 1992, and is scheduled to be completed by March 31, 1997. The EIIRP has been conducted in four phases following generally accepted standards for environmental investigations. These are summarized as follows :

Phase I : Begun in 1992, this phase consisted of the *preparation of environmental profiles* of each inhabited reserve. It was completed at the end of the 1992-1993 fiscal year.

Phase II : On-site visits to reserves, accompanied by First Nations residents and by teams of experts, to conduct initial soil and water sampling of suspicious sites. The majority of this phase was completed in 1995.

Phase III : In-depth testing of the sites that were discovered, through sampling in Phase II, to be contaminated by a particular hazardous or toxic substance. This phase was to be completed by the end of 1996. However, they may be some remaining Phase III work to be done in 1997.

Phase IV : Preparation of a *final report* that documents all the Phase III findings, with recommendations for follow-up action. Firm cost estimates for any remaining site remediation will be provided at this stage.

Remediation : Although the main objective of the EIIRP was to identify contaminated sites and document findings with recommendations for follow-up action, remedial activities have been ongoing throughout the process. The EIIRP's emphasis on remedial action has focused on 'orphan' sites, i.e., those sites that have been abandoned and for which a responsible party cannot be found, or where the owner is unable or unwilling to pay for needed clean-up.

Main Findings and Conclusions

The EIIRP has helped the department meet its legal obligations under federal environmental legislation, thereby reducing the risk of being charged under the law. It has contributed to meeting departmental obligations with respect to *due diligence* by remediating those on-reserve sites that pose a risk to health and safety. Since its inception in 1992, the EIIRP has significantly reduced the risks to health and safety by addressing and remediating contamination issues on reserves.

As of December 31, 1996, over 2,400 environmental issues had been identified and documented in the Environmental Issues Inventory System (EIIS). Of these, 576 were designated as of 'high risk' to human health and safety, and 430 of them have been or are being remediated. Fuel storage and handling and waste disposal account for the bulk of the environmental issues found on reserves. A total of $62.6 million has been spent on EIIRP-related activities to date of which $35.4 million has been used for remediation activities. Another $17.0 million has been budgeted for EIIRP activities in 1997-1998.

It should be noted that when the EIIRP began, there were no common federal practices, protocols or policies in place for managing contaminated sites on federal lands. DIAND is one of the first federal departments to have undertaken a project of this scope and magnitude.

In the course of carrying out the EIIRP, an increased awareness has developed within First Nation communities concerning existing and potential environmental problems. Through First Nation participation in the EIIRP as well as in specialized preventive environmental training administered by the department, First Nation representatives have received practical knowledge in the clean-up of existing environmental problems and have learned ways to prevent their occurrence in the future.

Unintended Impact and Effects :

One of the unintended results of initiating the EIIRP was that the department opened itself up to a greater level of liability. Through the EIIRP process, the department uncovered environmental hazards and concerns it had not previously been aware of. As a consequence, it needed to do something about these contamination problems or face legal liability if it did not.

In addition, the EIIRP process uncovered certain weaknesses or gaps in some of the legislation applying to reserves. For instance, the Indian Reserve Waste Disposal Regulations (IRWDR) does not control third party polluters, especially Holders of Certificates of Possession (CP Holders).

Better national standards are also required in order to establish consistency in ranking priorities and determining the level of the remedial action that is needed to address environmental problems. This has a direct bearing on the final costs of clean-ups.

Environmental Issues Inventory System :

A key element of the EIIRP process was the establishment of an automated, national, environmental issue database known as the Environmental Issues Inventory System (EIIS). The initial EIIS was considered by regional users to be less than ideal, since it was not easy to enter data into the system. The system has since been re-designed to make it easier to enter data and to accommodate regional needs better—in particular, that of tracking expenditures and activities related to each issue. The information in the EIIS can be consolidated at various levels to support informed decision-making, as well as to ensure accountability for the use of funds.

Conclusion :

The IEPP is now coming to a close and a decision must be made about what steps need to be taken next. Environmental health and safety issues have been addressed and procedures have been put in place, standards continue to be set, and the database of issues is being refined as this report is being written. These mechanisms must be maintained, and new ones need to be devised if the environmental integrity of reserve lands is to remain protected.

Recommendations

The following list the main recommendations resulting from the findings and observations of this evaluation of the EIIRP component of the IEPP :

Profile

Since its inception, the EIIRP has successfully identified and addressed many environmental issues threatening health and safety on reserve land. The most widespread and urgent environmental problems are those related, first, to hydrocarbon contamination of soil and, secondly, to waste disposal. In the absence of regulatory regimes, the department needs to take practical steps to address and manage these major environmental issues on reserve lands.

The EIIRP has also underscored the need for legislation to enforce environmental regulations. Bands have expressed concern about the inability of their by-laws, and the weak legal support offered by the department, to control third-party polluters and CP Holders. The EIIRP process uncovered certain weaknesses or gaps in some of the legislation applying to reserves. Amendments to existing legislation are needed to allow First Nations to enforce environmental standards on reserves more effectively.

Recommendation 1 : That the Director of the Environment and Natural Resources Directorate (ENRD) develop a national framework to provide a common approach for regions to use in developing their fuel storage tank management strategies.

Recommendation 2 : That the Director, ENRD, support regions in developing their own waste management strategies. Using the national framework for Solid Waste Management as a standard, these strategies should address community awareness, construction and operating standards, training, inspection and monitoring, as well as the terms and conditions in leases and permits.

Effectiveness

The EIIS database has already proved its usefulness for identifying and documenting the number of contamination issues on reserves.

The IEPP's 'sunset' provisions raise concerns about the continued use and maintenance of the inventory database. The information in the EIIS database provides not only a 'snapshot' of baseline information, but also activity and funding information that requires continual updating. This data is important in that it can provide a historical perspective of what action has been taken on a particular contaminated site on a reserve.

However, unless kept up-to-date, the data in the inventory database will quickly become dated, thus ceasing to perform its vital function of keeping the department abreast of the environmental situation on reserves. Statutory obligations and the need for *due diligence* provide strong incentives to maintain the EIIS as an active database on environmental issues on reserves across Canada.

Recommendation 3 : That the Director, ENRD, continue to maintain the Environmental Issues Inventory System (EIIS) database after March 31, 1997 as a tool to manage and monitor ongoing activities related to environmental issues on reserves. Regional environmental units will remain responsible for updating information on the EIIS;

Recommendation 4 : That the Director, ENRD, in cooperation with regional environment managers, explore the possibility of eventually transferring the EIIS database to tribal councils and First Nations for their use.

Vulnerability

DIAND's overall legal liability may have been reduced as a result of activities carried out under the EIIRP, but it is unlikely that DIAND or First Nations will have the necessary funds to remediate all contaminated sites before the end of March 31, 1997.

Moreover, environmental issues related to contamination will continue to crop up. As a result, the department's legal vulnerability remains—albeit with exposure to fewer issues than before.

Despite the absence of regulatory regimes, DIAND must address the management of environmental issues on reserve lands more effectively. Currently, no federal minimum standards of *due diligence* exist to determine the potential risks posed by the contamination of federal lands and the appropriate remedial action required.

Better national standards are required to establish consistency in ranking priorities and determining the level of the remedial action that is needed to address environmental problems.

Recommendation 5 : That the Director, ENRD, in cooperation with First Nation communities, develop a joint action plan to establish uniform and consistent environmental standards and strategies for managing contaminated sites on reserve. It should address any weaknesses or gaps in legislation applying to reserves.

Rationale

Both the Government of Canada, in its *Guide to Green Government*, and the Minister of DIAND have emphasized a commitment to sound economic management through sustainable development and the preservation of Canada's environment. The objectives of the EIIRP are in line with these goals, ensuring that reserves will be environmentally healthy and safe.

With the IEPP scheduled to 'sunset' or end on March 31, 1997, when the Green Plan's funding also ends, any continued funding will require departmental approval. To complete the EIIRP effectively, all Phase III and remedial action on 'orphan' and high-risk sites needs to be satisfactorily completed. This will likely require the development of a strategy to assess and clean up the remaining contaminated sites after March 31, 1997.

Continuing the EIIRP activities will ensure the momentum of remedial activities, the maintenance of the environmental issues inventory, and that monitoring continues until the risks are reduced to satisfactory levels.

Recommendation 6 : That the Director, ENRD, prepare a report summarizing all projects undertaken with Indian Environmental Partnership Program (IEPP) funding under its Environmental Issues Inventory and Remediation Plan (EIIRP).

Recommendation 7 : That the Assistant Deputy Minister, Lands and Trust Services (LTS), seek approval to extend the EIIRP to assess and clean up remaining contaminated sites after March 31, 1997, until all Phase III and remedial action on 'orphan' and high-risk sites are satisfactorily completed.

Improvements

The EIIRP process has made it evident that mechanisms are needed to prevent future environmental problems. A well-designed Environmental Management System (EMS), implemented at the First Nation community level, could help to achieve this. It would provide First Nations with a framework to ensure that on-reserve operational activities and decision-making are undertaken in environmentally responsible ways.

Consistent with the federal policy of devolving responsibility and authority to First Nations, along with the initiatives towards self-government, an EMS can also help DIAND and the First Nation to define and understand clearly the roles and responsibilities for environmental protection of reserve lands.

Recommendation 8 : That the Director, ENRD, in cooperation with the Regional Environmental Managers (REMs) and First Nations, explore measures for preventing or minimizing adverse environmental effects from occurring in the future and develop environmental capacity-building mechanisms within First Nation communities.

Organization of Evaluation Report

The evaluation of the EIIRP was conducted by a team of consultants from Pearmain Partners, Certified Management Consultants, Ottawa. After reviewing headquarters (HQ) documentation on the EIIRP, an evaluation questionnaire was designed for interviews in person and by telephone with HQ and regional program managers (see **Appendix III - E**).

Two case studies were carried out on specific reserves and sites in Quebec and British Columbia. (see **Appendices I and II**). Band Managers and Chiefs were interviewed on site for these case studies.

The evaluation report has been divided into the following sections :

Section 1 elaborates on the objectives and scope of the evaluation, and describes the six criteria against which the program is being evaluated. As no evaluation framework or program indicators were in place, the consultants have introduced a Program Logic Model to evaluate the various components of the EIIRP.

Section 2 provides the background to the EIIRP, including delivery through various phases, a list of the stakeholders, relevant legislation and policies, organization, and how funding was allocated.

Section 3 addresses the main findings and observations from the perspective of the impact and effect of the EIIRP, and draws conclusions about and makes recommendations on the future direction of the EIIRP component of the IEPP.

Three appendices complete this evaluation report. The first two summarize the case studies undertaken on specific reserves in Quebec and British Columbia. The third appendix includes : a glossary of abbreviations; a list of relevant legislation, regulations and guidelines; persons contacted and interviewed; documents cited; and, a copy of the questionnaire used in interviews with various staff members from headquarters and the regions.

Section 1 - Objective and Scope of the Evaluation

The objective of this evaluation is to examine the rationale, effectiveness, and overall impact of the Indian Environmental Partnership Program (IEPP) and identify areas for possible improvement. Only one component of the IEPP is being examined here, namely the EIIRP.

The scope of this evaluation is to focus on the overall effectiveness of the EIIRP component of the IEPP, including areas for improvement, its contribution in terms of meeting the department's *due diligence* requirements, and its overall impact since its inception and implementation. As stated in the terms of reference, the evaluation of this program will address the following six issues :

1. **What is the profile of the EIIRP?**

   Describe the objectives, process, rationale, targets, activities and outputs of the EIIRP.

2. **How effective is the EIIRP at generating accurate, relevant and timely data about environmental issues on reserves?**

3. **To what extent has the EIIRP reduced DIAND's vulnerability to charges under the *Canadian Environmental Protection Act* (CEPA) and the *Fisheries Act*?**

4. **What impact, both intended and unintended, has resulted from the EIIRP?**

   Has the EIIRP led to any improvements to the environment on reserves—in particular, as regards health and safety? Have economic development opportunities for First Nations been enhanced?

5. **In the context of current departmental objectives, is there a continuing rationale for the program, and, if so, should the program be extended or expanded?**

   Given current departmental objectives, how appropriate would it be to continue delivering the program and what conditions should be included to maintain its efficiency and effectiveness? The need here is to analyse the effect, if any, of ongoing plans to transfer program responsibilities to First Nation communities.

6. **What improvements can be made to the implementation and coordination of the EIIRP, including increased opportunities for First Nations to become more directly involved in environmental management?**

   There will be an examination of capacity-building among First Nations, and what is required to reach an acceptable level of autonomy in environmental management.

Logic Model

New programs normally include evaluation frameworks that show intended activities, expected effects, and key program indicators. These frameworks are used to evaluate programs. In the absence of such a framework, the consultants devised a Program 'Logic Model,' described below, as the basis for assessing and evaluating the EIIRP activities.

Logic models can demonstrate a program's progress from the stated objectives to the attainment of those objectives which, in turn, have led to results or effects, both intended and unintended, some of which may be negative and others positive. The program activities are those undertaken in order to achieve the intended results and effects.

The logic model for the EIIRP was prepared on the basis of the stated objectives of the IEPP. The following describes the logic and links of the model.

Program Components

Main Objectives : The two main objectives of the EIIRP are to .

1. address DIAND's legal obligations under federal environmental legislation such as the *Canadian Environmental Protection Act* (CEPA), the *Fisheries Act*, and the *Indian Act* regarding reserve lands. The main objective of the EIIRP is to reduce the government's legal liability by addressing contamination issues on inhabited reserves that threaten the health and safety of reserve residents; and

2. improve the health and quality of life on reserves by carrying out the government's commitments under the Green Plan. This includes undertaking, in partnership with First Nation authorities, an inventory of all environmental issues on inhabited reserve land with a view to remediating 'orphan' and high-risk sites where necessary.

Subordinate Objectives : The department's subordinate objectives regarding the EIIRP are to :

1. generate accurate, timely and relevant data on significant environmental issues on reserves; and

2. enhance First Nations' environmental knowledge and management development through direct experience and specialized training.

Program Activities : Program activities are the actions undertaken to achieve the intended effects. The EIIRP was implemented in four phases :

Phase I - Initial assessment of environmental threats and risks through document reviews of past activities and interviews with First Nation band councils.

Phase II - On-site visits and initial inspection of suspected contaminated sites by experts.

Phase III - In-depth testing and sampling of those sites determined in Phase II to be contaminated, and remediating them as recommended.

Phase IV - Final report on findings, with recommendations for follow-up action.

Outputs : The EIIRP has been designed to yield the following outputs :

Output 1 - Development of standards for remedial action and effective criteria for determining levels of risk assessment.

Output 2 - Effective identification of high-risk sites. Development of methods to assess the nature and extent of contamination and its effects on health and safety.

Output 3 - Development of effective terms of reference for environmental consultants.

Output 4 - Development of an effective environmental inventory system and database.

Output 5 - Complete assessment of all issues including oil and gas. (Environmental issues arising from the extraction of oil and gas are the responsibility of Indian Oil and Gas Canada (IOGC)).

Output 6 - Environmental consultants and band members subcontracted by some tribal councils and First Nations.

Output 7 - Training courses on effective environmental management practices given to First Nations representatives.

Impact and Effects : Once the EIIRP has been completed, it is expected that DIAND will have :

1. enhanced its *due diligence* obligations under the *Indian Act*;

2. reduced the threat of being prosecuted under CEPA and the *Fisheries Act;*

3. addressed First Nations' health and safety concerns;

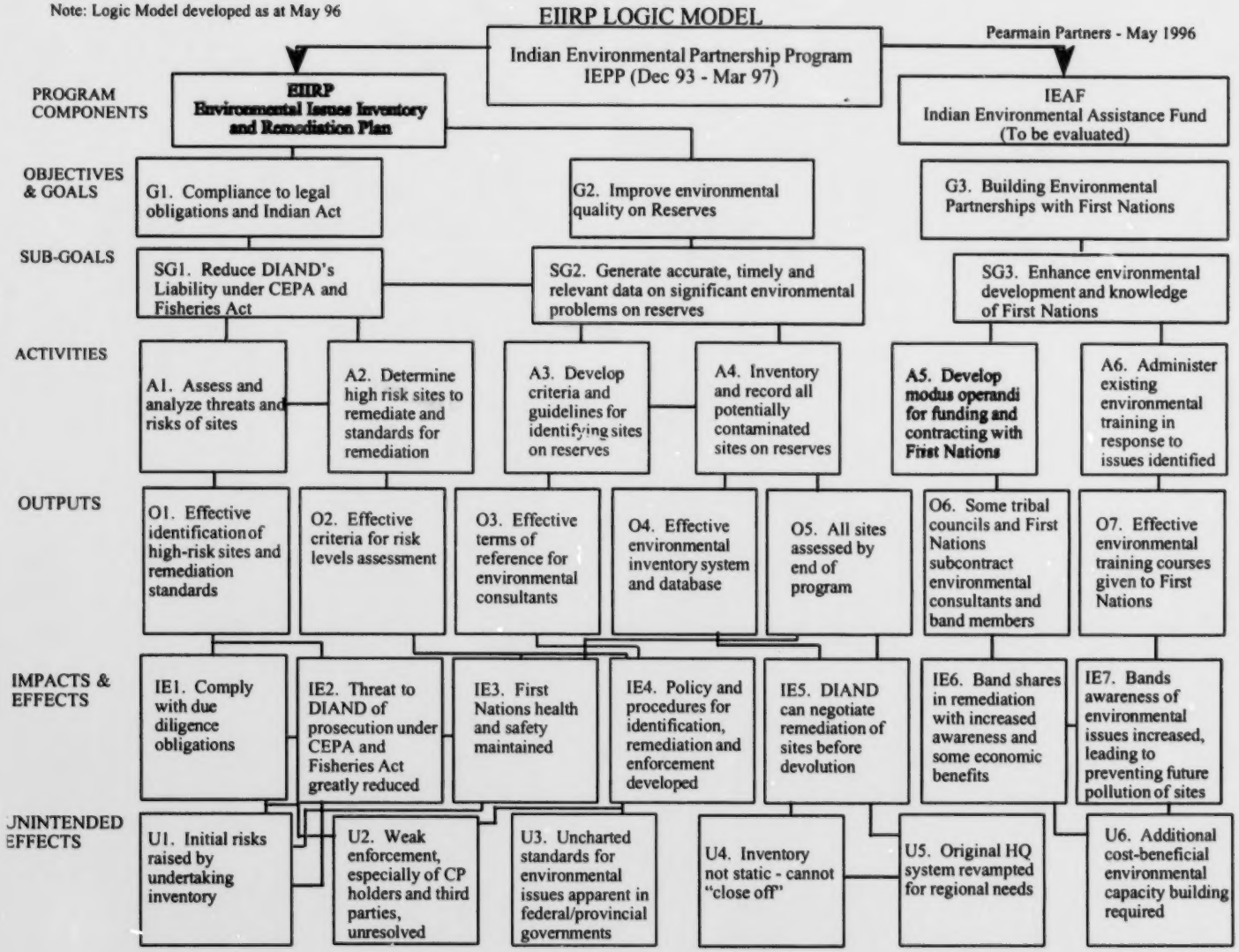
4. developed policy and procedures for identifying environmental issues and implementing remedial action of contaminated sites;

5. remediated all the 'orphan' and high-risk sites;

6. increased First Nation awareness about environmental issues and shared with them some of the derivative or collateral economic benefits of environmental action; and

7. decreased the potential for contamination and pollution occurring on reserve lands in the future.

Figure 1 : Program Logic Model


Note: Logic Model developed as at May 96
EIIRP LOGIC MODEL
Indian Environmental Partnership Program
IEPP (Dec 93 - Mar 97)
Pearmain Partners - May 1996
PROGRAM COMPONENTS
EIIRP
Environmental Issues Inventory and Remediation Plan
IEAF
Indian Environmental Assistance Fund
(To be evaluated)
OBJECTIVES & GOALS
G1. Compliance to legal obligations and Indian Act
G2. Improve environmental quality on Reserves
G3. Building Environmental Partnerships with First Nations
SUB-GOALS
SG1. Reduce DIAND's Liability under CEPA and Fisheries Act
SG2. Generate accurate, timely and relevant data on significant environmental problems on reserves
SG3. Enhance environmental development and knowledge of First Nations
ACTIVITIES
A1. Assess and analyze threats and risks of sites
A2. Determine high risk sites to remediate and standards for remediation
A3. Develop criteria and guidelines for identifying sites on reserves
A4. Inventory and record all potentially contaminated sites on reserves
A5. Develop modus operandi for funding and contracting with First Nations
A6. Administer existing environmental training in response to issues identified
OUTPUTS
O1. Effective identification of high-risk sites and remediation standards
O2. Effective criteria for risk levels assessment
O3. Effective terms of reference for environmental consultants
O4. Effective environmental inventory system and database
O5. All sites assessed by end of program
O6. Some tribal councils and First Nations subcontract environmental consultants and band members
O7. Effective environmental training courses given to First Nations
IMPACTS & EFFECTS
IE1. Comply with due diligence obligations
IE2. Threat to DIAND of prosecution under CEPA and Fisheries Act greatly reduced
IE3. First Nations health and safety maintained
IE4. Policy and procedures for identification, remediation and enforcement developed
IE5. DIAND can negotiate remediation of sites before devolution
IE6. Band shares in remediation with increased awareness and some economic benefits
IE7. Bands awareness of environmental issues increased, leading to preventing future pollution of sites
UNINTENDED EFFECTS
U1. Initial risks raised by undertaking inventory
U2. Weak enforcement, especially of CP holders and third parties, unresolved
U3. Uncharted standards for environmental issues apparent in federal/provincial governments
U4. Inventory not static - cannot "close off"
U5. Original HQ system revampted for regional needs
U6. Additional cost-beneficial environmental capacity building required

Section 2 - Environmental Issues Inventory and Remediation Plan

Background

The department began the EIIRP in the summer of 1992, in partnership with First Nations authorities, on all inhabited reserves across the country. On June 1, 1993, Cabinet approved the IEPP, which included the EIIRP along with a second component, namely, the IEAF. The department undertook the IEPP as part of the government's Green Plan initiative.

The EIIRP was implemented in order to :

- enable DIAND to determine the location and severity of contaminated sites and, where necessary, to clean up (remediate) those that posed a risk to health and safety;
- help the department meet its legal obligations under the *Canadian Environmental Protection Act* (CEPA), the *Fisheries Act* and other applicable federal and provincial legislation;
- prevent the occurrence of future environmental problems.

(The second program component, the IEAF is, in part, a funding mechanism to support First Nations' participation in pre-panel environmental assessment processes for large projects off-reserve. It will be the subject of a separate evaluation.)

The EIIRP was designed to respond to a range of environmental issues that were thought to exist on reserves, including illegal dumping, chemical spills, illegal storage of hazardous materials, contaminated water, etc. For example, extensive media coverage has drawn attention to the health and safety implications of incidents such as the Hagersville tire fire in Ontario, the St. Basile le Grand PCB waste site dumping, and the British Columbia Kitasoo bunker oil spill into fishing grounds.

Previously, environmental issues on reserves were handled individually, on an ad hoc basis. As a result, no comprehensive documentation was available on environmental conditions on reserve lands.

There was also the risk that, if this situation continued, departmental employees and senior officials could be prosecuted for violations under the CEPA or the *Fisheries Act*. The department could be held liable for problems which might arise from unknown issues on environmentally contaminated sites. The Federal Crown, as owner of the land, is ultimately responsible for compliance with environmental protection on reserves.

Other risks arose from the fact that provincial environmental legislation does not apply, and federal statutes are generally inadequate for managing environmental issues on Indian reserves. Moreover, the *Indian Act* does not provide clear authority for First Nations to adequately protect their own environment.

EIIRP Process and Activities

The EIIRP is a multi-phased initiative to identify and document environmental problems on over 800 inhabited reserves across the country. It began in June 1992, and is scheduled to be completed by March 31, 1997. It was conducted in four phases following generally accepted standards for environmental investigations. These can be described as follows :

The Phases of the EIIRP :

Phase I : Begun in 1992, this phase involved preparing environmental profiles for each inhabited reserve. These profiles were based on examinations of available records of past and present activities on reserve lands and on reports submitted by band councils. This phase was completed at the end of the 1992-1993 fiscal year.

Phase II : This phase involved on-site visits to reserves, accompanied by First Nations residents and teams of experts, to conduct initial soil and water sampling of suspected sites. Most of this phase was completed in 1995.

Whenever a specific environmental issue is found on a site in an inhabited reserve it is documented and becomes part of the Environmental Issues Inventory (EII). The issues are then classified in terms of overall risks (i.e., high, medium, low and unknown) based on the guidelines of the Canadian Council of Ministers of the Environment for classifying contaminated sites. The 'unknown' classification represents sites where the potential risk is not known without further detailed examination. These sites are then validated through in-depth testing, and are followed by recommended remedial action.

In most regions, for Phase II, the REM established a standing offer with recognized firms of environmental consultants, usually consulting engineers specializing in environmental issues; a standard Request for Proposal and standard Report Outline were also developed. In some regions, a tribal council or band was funded by the region to undertake the process directly with consultants.

Data from the Phase II reports would then be keyed into the EIIS database. This automated database was designed to capture relevant baseline data in order to manage and track actions carried out to address the issue. Each issue is given a unique inventory number to identify it in the database, which includes the following information :

Profile :	Band, reserve, site name, description of the issue, type of issue, and risk assessment;
Location :	Type of site, address or location, and legal land description;
Site Specific :	Site action required, estimated cost for this site action, and impact significance;
Site Operator :	Occupant, contact name, address and phone number;
Regulatory :	Actual or potential violation of federal legislation, and documentation completed for the issue;
Sign-off :	Office of prime interest, departmental contact, address and phone;
Funding :	Type of action on a given site that was funded, source of this funding, fiscal year, starting date and scheduled completion date; and
Tracking :	Site action being tracked, action description and update.

This data forms the basis for the regional EIIS inventory. The data is accessible both at the regional and HQ level. While the design of the EIIS was not initially considered 'user-friendly,' it has since been altered to a readily workable system. The intent has been to develop a system that ensures the greatest degree of data consistency and congruency on a national level, so that it serves both HQ's and the regional offices' needs. By December 1996, over 2,400 environmental issues had been entered into the EIIS.

Phase III : This involves more detailed investigations of the sites discovered, through preliminary site analysis in Phase II, found to be contaminated by a particular hazardous or toxic substance. Further in-depth testing is carried out to determine the extent of contamination and to recommend on follow-up remedial action. All Phase III activities are to be completed by the end of 1996.

Remediation : Although the main objective of the EIIRP was to identify contaminated sites and document findings with recommendations for follow-up action, remedial activities have been ongoing throughout the process. Should any contamination be found posing an immediate risk to reserve residents, remedial action will be initiated either by the polluter or by DIAND if it is considered a departmental responsibility. The department operated on the general principle that the 'polluter pays.'

The emphasis of remedial action in the EIIRP has been on 'orphan' sites, that is, those where the original activities have been abandoned and where the owner cannot be found, or, if found, when that owner cannot afford to clean up the site. The second priority is to remedy high-risk sites where contamination was found to pose an immediate risk to reserve residents.

Phase IV : Preparation of a final report documenting all the Phase III findings with recommendations for follow-up action on any outstanding issues. Firm cost estimates for remedial action to any remaining site will be provided at this stage.

Community Prevention Training :

In the course of carrying out the EIIRP it was discovered that, in many cases, environmental issues could have been avoided had adequate training been available to First Nations communities. As a result, the department embarked on a program of Community Prevention Training for First Nation individuals and communities.

With an annual budget of $200,000, this fund provided for very basic, 'how-to' training, and, if possible, 'hands-on' sessions, presentations and information sheets. This training can be as simple as circulating a checklist on storing chlorine properly, a presentation on fuel handling, or a demonstration on correctly inspecting an existing site to locate and store hazardous materials properly.

The major costs for such events were limited to travel and lodging, as the free or inexpensive resources that other departments, provinces or local municipalities made available were put to best use. In some cases, courses to meet some specialized or specific requirement were adapted by DIAND and delivered by Environment Canada or other organizations. These are some examples :

- a training package prepared by Red River Community College, Manitoba, on Proper Fuel Handling;
- Environmental Emergency Response and Handling and Storage of Dangerous Goods, developed by Environment Canada, Quebec; and
- Environmental Emergency Response, by Environment Canada in Saskatchewan.

EIIRP Organization and Delivery

While the overall direction and coordination of the EIIRP is the responsibility of the ENRD of Lands and Trust Services (LTS) at headquarters, the regional offices of DIAND, through their Environment Units, are responsible for ensuring that inventory and remedial action plans are implemented in their respective regions.

Each year, regions submit to ENRD their budget requirements for carrying out plans for their respective regional EIIRP projects and activities.

The **Organization Chart** shows two regional organizational models.

Type A : - Saskatchewan

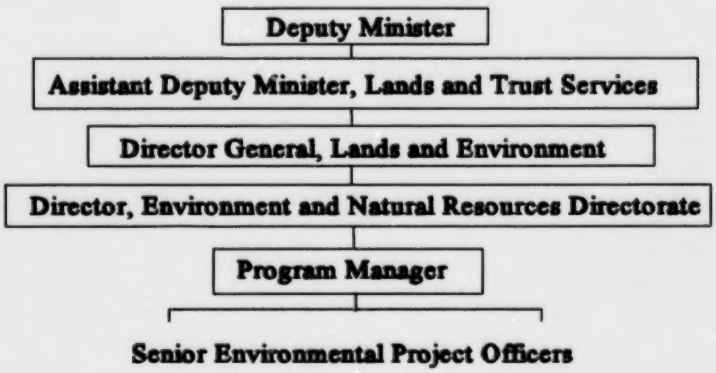
The REM reports to the Director of LTS, and has reporting to him or her a number of Environmental Specialists. They, in turn, liaise with tribal councils, bands and with Public Works Canada, Real Property Services. Technical Services may or may not have a specialist environmental engineer on staff, and tribal council may or may not have the engineering or environmental expertise to deal with environmental issues (although some do retain as advisors external consultants who have the requisite experience).

Type B : - British Columbia

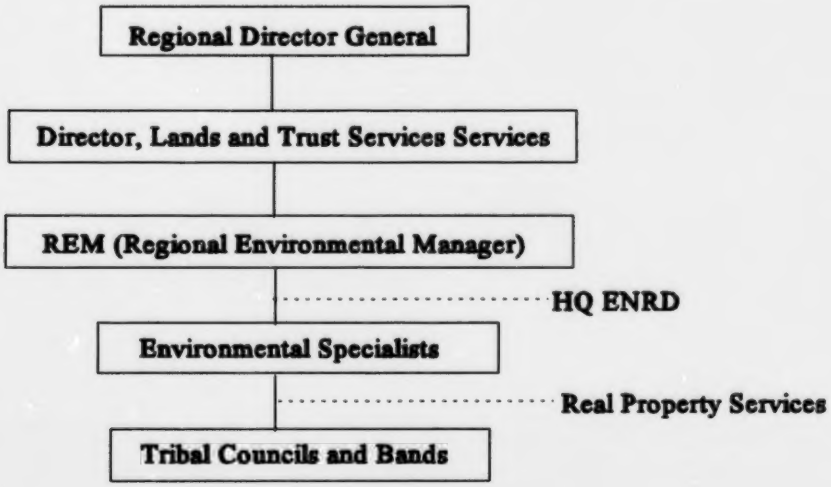
The REM reports to the Director of LTS and acts mainly as an advisor liaising with LTS and with Technical Services and HQ. The Environmental Specialists do not report directly to the REM, as in Type A, but deal directly with tribal councils and bands on specific environmental issues. They report to the Lands Manager.

Organization Chart

DIAND HQ :


Deputy Minister
Assistant Deputy Minister, Lands and Trust Services
Director General, Lands and Environment
Director, Environment and Natural Resources Directorate
Program Manager
Senior Environmental Project Officers

Region Type A (e.g., Saskatchewan) :



Region Type B (e.g., British Columbia)

Stakeholders

From a program evaluation perspective, it is important to identify the EIIRP's stakeholders. These are the people and organisations with an interest in the outcome, and may be affected by the Program's impact and effects, both intended and unintended.

Main Stakeholders :

The following are identified as key stakeholders in the EIIRP :

DIAND : As the trustee of Crown lands and assets on reserves, it is responsible for administering the *Indian Act*.

First Nations : (i.e., bands and tribal councils) As occupants of the reserves, they are affected most directly by the impact on health and safety of contaminated sites, as well as by threats to their livelihood from contaminated land and waters and third-party polluters.

First Nations CP Holders : As individuals, they must comply with various relevant pieces of legislation affecting reserve lands.

Secondary Stakeholders :

The secondary stakeholders include :

Other federal departments : These include Environment Canada, Fisheries and Oceans (and the Coast Guard), and Health Canada. Their principal interest in terms of the EIIRP is that they are responsible for ensuring compliance with legislation under their jurisdiction which affects Crown lands.

Provincial ministries and municipalities : Provincial governments and municipalities are interested in ensuring that activities on federal Crown lands do not create pollution on or contaminate their lands, and that activities on their lands do not contaminate federal Crown lands including reserves. Environmental laws, regulations and standards differ from province to province, and do not generally apply on reserves.

Canadian public and special interest groups : The public has an interest in seeing that federal Crown lands are safe from pollution and contamination. The Auditor General's Report of May 1995 noted the inadequacy of information on environmental costs and liabilities associated with federal contaminated sites.

Legislation, Regulations, and Policy Guidelines :

Some of the main pieces of legislation relevant to the EIIRP are listed in **Appendix III -B (Relevant Legislation and Policies)**. Under the *Indian Act*, the department must ensure the health and safety of status Indians and preserve Crown assets. However, the *Indian Act* does not provide clear authority for First Nations to protect their own environment. Provincial environmental legislation does not apply and federal statutes are inadequate for managing environmental issues on Indian reserves.

The department is responsible for environmental conditions on reserve lands arising from past activities. Since contamination cannot always be readily detected, there is a continuing risk that existing contamination may result in liabilities related to legal, health and safety issues.

Even though the federal *Indian Reserve Waste Disposal Regulations* (IRWDR) requires the permitting of waste sites on reserves, weak penalties for non-compliance render the regulation essentially ineffective. The IRWDR is rarely used for issuing permits for solid waste sites and sewage treatment. Third-party waste sites can be developed on-reserve and do receive, for example, tires and hazardous wastes. With the potential for contamination, this could lead to charges against the department stemming from environmental legislation violations.

Until formal policy and procedures are in place to ensure that fuel storage tanks are properly installed and maintained, the Crown is exposed to the risk of on-reserve contamination and spills. To date, only guidelines have existed for fuel storage tanks, with no assurance that fuel handlers and storage tank installers are properly trained or certified. Fuel products have been shown to be the cause of the most common form of contamination on reserve lands, with potential for legal, health and safety violations.

DIAND, in its implementation of the EIIRP, has followed a set of policies, procedures and guidelines put out by the Canadian Council of Ministers of the Environment. These include the National Classification System for Contaminated Sites and the Interim Canadian Environmental Criteria Standards for Contaminated Sites.

An Environmental Priority Setting Framework was also developed by ENRD, at HQ, to identify and assess levels of risk, and to determine the level of priority to address the environmental issues that were identified.

IEPP Program Budget

Cabinet approved the IEPP on June 1, 1993 at a joint meeting of the Cabinet Committee on the Environment and the Committee on Human Resources, Social and Legal Affairs. The Priorities and Planning Committee ratified the initiative on June 3, 1993. Although the EIIRP had begun in 1992 using DIAND A-Base funding, the IEPP only received Treasury Board approval as part of the Supplementary Estimates of 1993-1994. DIAND A-Base funds and Green Plan funds were committed as follows :

Table 1 **Indian Environmental Partnership Program (IEPP)**
($M)

SOURCE	1993-1994	1994-1995	1995-1996	1996-1997	TOTAL
A-BASE	3.4	3.0	5.0	5.0	**16.4**
GREEN PLAN	0.8	4.1*	5.1*	5.6*	**15.6**
TOTAL	**4.2**	**7.1**	**10.1**	**10.6**	**32.0**

(* Includes $1.0 million for IEAF)

A condition of the national Green Plan funding was that it be allocated specifically for EIIRP and IEAF activities, and not for any other purposes. (Prior to 1994-1995, the IEAF was funded from DIAND's A-base budget. IEAF Green Plan funds began being utilized as of 1994-1995).

In 1989, the federal government, together with the Canadian Council of Ministers of the Environment announced the creation of the National Contaminated Sites Remediation Program (NCSRP). On April 1, 1990 a five-year, $25 million cooperative federal-provincial program was established to identify, priorize, and clean-up sites across Canada that have been contaminated by hazardous materials. It sought to :

- determine the number and scope of contaminated sites on federal properties;
- provide cost-shared funds (50/50) **to assess** the nature and extent of contamination on specific sites (maximum of $100,000);
- provide cost-shared funding **to clean up** the most highly contaminated federal sites where internal jurisdiction is unclear.

DIAND, through the EIIRP, has utilized NCSRP cost-shared funds for several projects. The total funding provided by the NCSRP to EIIRP projects amounted to some $300,000.

EIIRP Funding Allocations

In general, funding of the EIIRP in regions was allocated on the basis of each region's indicated need and capacity for delivery. Each region was initially funded to complete their Phase II (i.e., on-site visits and investigation of suspected sites). Based on findings of the Phase II reports, priority would then be given to funding sites identified as being of high risk. Funds were allocated either for Phase III activities (in-depth testing and sampling) or, where recommended, remedial action.

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Although the EIIRP begins each fiscal year with an initial budget of Green Plan and A-Base funding (see Table 1 above), supplementary departmental funding was received during each fiscal year. This allowed for the acceleration of expenditures to meet regional funding requirements that would have had to be postponed. The following Table 2, (below) provides a historical summary of the funding allocated for the regions to carry out EIIRP activities.

Environmental Issues Inventory and Remediation Plan (EIIRP)
(Excludes IEAF Funding)

Table 2 **Regional Budget Allocations** **December 31, 1996**

Region	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	Total
Atlantic	$254,000	$158,917	$317,000	$295,100	$555,800	**$1,580,817**
Quebec	$513,500	$374,000	$851,705	$3,271,000	$0	**$5,010,205**
Ontario	$960,000	$1,138,700	$2,562,830	$6,011,000	$9,378,000	**$20,050,530**
Manitoba	$474,530	$362,755	$1,235,400	$6,868,500	$6,167,000	**$15,108,185**
Saskatchewan	$261,000	$160,521	$659,500	$1,965,500	$2,762,000	**$5,808,521**
Alberta	$500,000	$281,500	$427,500	$1,733,000	$1,461,000	**$4,403,000**
British Columbia	$700,000	$1,141,667	$1,395,000	$4,009,500	$3,098,900	**$10,345,067**
Yukon (Northern BC)	$0	$106,250	$122,800	$37,000	$0	**$266,050**
Total	**$3,663,030**	**$3,724,310**	**$7,571,735**	**$24,190,600**	**$23,422,700**	**$62,572,375**

Funding History

The following table (see Table 3 below) summarizes how funding was allocated among the various phases, for remedial action, and on training related to the EIIRP.

Much of the initial funding was allocated for carrying out Phase II site visits. Once the reserves had been visited, reports that provided the basis for implementing further site characterizations and in-depth investigations were completed. At that stage, remedial action of 'orphan' and high-risk sites also began. Much of the funding is now going towards remedial action; it is expected that this is also where the majority of future allocations will go.

Environmental Issues Inventory and Remediation Plan (EIIRP)
(Excludes IEAF Funding)

Table 3 **Funding History by Activity** **December 30, 1996**

Activity	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	Total
Phase II	$2,729,509	$1,249,388	$1,710,000	$11,000	$90,000	**$5,789,897**
Phase III	$603,521	$1,656,578	$2,307,050	$7,992,700	$8,120,800	**$20,680,649**
Remediation	$330,000	$818,344	$3,375,035	$15,872,800	$14,999,100	**$35,395,279**
CPT	N/A	$0	$179,650	$314,100	$212,800	**$706,550**
TOTAL	$3,663,030	$3,724,310	$7,571,735	$24,190,600	$23,422,700	$62,572,375

Program Indicators

Some indicators that can determine how successful the program has been have to do with the identification of issues, the number of sites which required further testing, and, finally, the number of sites that required remedial action because they were considered 'high risk.' These indicators suggest how important it was to have undertaken the EIIRP, since they measure the degree of contamination on reserve lands and, as a result, of the Government's liability. Table 4 below, summarizes the number and proportion of high risk issues that had been documented in the EIIS as of December 31, 1996.

Environmental Issues Inventory and Remediation Plan (EIIRP)

Table 4 **Status Report as of December 31, 1996**

REGION	Number of Issues	High Risk		Issues Remediated	
		(#)	(%)	(#)	(%)
Atlantic	52	3	5.8%	12	23.1%
Quebec	344	14	4.1%	17	4.9%
Ontario	713	138	19.4%	51	7.2%
Manitoba	191	101	52.9%	33	17.3%
Saskatchewan	231	30	13.0%	66	28.6%
Alberta	111	73	65.8%	89	80.2%
B.C.	810	216	26.7%	161	19.9%
Yukon	1	1	100.0%	1	100.0%
Total	**2,453**	**576**	**23.5%**	**430**	**17.5%**

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Types of Contamination

There is a wide diversity in degrees of contamination found on reserves. It can range from high-risk issues requiring immediate attention to lower levels of risk that permit a more flexible response. As can be seen from **Table 5**, below, the most widespread and urgent environmental issues on reserves are those related to hydrocarbon contamination of soils. The primary sources of soil contamination are : leakage of hydrocarbons from storage facilities (e.g., underground and above-ground storage tanks (U/AST), fuel barrels and drums) and spillage during fuel transfer, handling and use. The other prime environmental issue on reserves is related to waste disposal (e.g., active and inactive dumps, and disposal of solid, liquid, and industrial waste).

Environmental Issues Inventory and Remediation Plan (EIIRP)
(As of December 31, 1996)

Table 5 **Type and Number of Issues**

Environmental Issue	TOTAL	(%)
Polychlorinated biphenyls (PCBs)	41	1.7%
Under/above ground storage tanks (U/AST)	1,190	48.5%
Waste Disposal (Active)	316	12.9%
Waste Disposal (Inactive)	193	7.9%
Solid Waste	178	7.3%
Mining Waste	4	0.2%
Tires	4	0.2%
Liquid Waste	25	1.0%
Industrial Waste	32	1.3%
Biomedical Waste	3	0.1%
Sewage	77	3.1%
Other Forms of Petroleum Products	37	1.5%
Air Pollution	22	0.9%
Water Pollution	38	1.5%
Soil Contamination	231	9.4%
Asbestos	23	0.9%
Other	39	1.6%
TOTAL	2,453	

Section 3 -

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In this section, the five evaluation issues defined previously (see 2.1) will be used to evaluate the EIIRP component of the IEPP. As an added way to assess the effectiveness of the EIIRP, the consultants considered the findings and observations arising from the Quebec and B.C. regions case studies (see Appendices I and II) as well as those drawn from their interviews with HQ and Regional officers. Also included is a presentation made by the consultants at the 1996 national meeting of REMs in Ottawa. The aim of that presentation was to get feedback on the evaluation from those in attendance.

Summary reports of the case studies are included as Appendices I and II. They summarize the experience of some reserves with the EIIRP.

As a preliminary observation, the consulting team would like to indicate that, to the best of their knowledge, the EIIRP undertaking is larger in scope than has ever been attempted by any Canadian organization, including the Department of National Defence or Transport Canada. It was very much a pioneer program : its participants, including environmental consultants, had little practical guidance to go on. There were no common federal practices, protocols or policies in place for managing contaminated sites on federal lands.

Despite this, the inventorying and assessment of environmental issues on reserves has been largely completed. Also, the remedial action on 'orphan' or abandoned and high-risk sites has been completed or is in the process of being completed.

The following findings, conclusions and recommendations are made on the basis of the five basic evaluation issues :

Profile

What is the profile of the EIIRP?

As part of the IEPP, the main objectives of the EIIRP are clearly stated. In short, the EIIRP was established to *determine the location and severity of contaminated sites* on inhabited reserves, and, where necessary, to remediate those that posed a risk to health and safety; to help *meet the legal obligations* of the Department under applicable federal and provincial legislation; and *to prevent* the occurrence of future environmental problems on reserve lands.

Since its inception, the EIIRP has successfully identified and addressed many environmental issues threatening health and safety on reserve lands. As of December 31, 1996, over 2,400 environmental issues had been identified and documented in the EIIS. Of these, 576 were designated as of 'high risk' to human health and safety; 430 of them have been or are being remediated. Fuel storage and handling and waste disposal account for most of the environmental issues found on reserves. A total of $62.6 million has been spent on EIIRP-related activities to date of which $35.4 million has been used for remediation activities. Another $17.0 million has been budgeted for EIIRP activities in 1997-1998.

The EIIRP contributed to its stated objectives as follows :

- in Phase I, it completed the identification of potential contamination issues on inhabited reserve lands;

- by March 31, 1995, over 90% of reserve communities had had at least one visit by a team of specialists to investigate. under Phase II, suspected sites;

- Phase II reports provided an overview of potential contamination issues located on the reserve. In some cases, they provided information on preliminary testing and sampling that had been undertaken to document the results.

- The process of completing more detailed technical studies, as part of Phase III, is well under way for completion by December 1996, with some remaining work to be completed in 1997;

- steps have been taken to remediate or clean up all orphan and high-priority contaminated sites. Some 430 issues had actually been or were in the process of being remediated by December 31, 1996.

In the course of carrying out the EIIRP, an increased awareness has developed within First Nation communities concerning existing and potential environmental problems. Through First Nation participation in the EIIRP, as well as in specialized preventative environmental training administered by the department, First Nation representatives have received practical knowledge in both cleaning up existing environmental problems and learning how to prevent them.

Conclusions :

From the consultants' observations the EIIRP seemed to target both departmental officials and First Nations representatives adequately. Overall coordination with First Nations and tribal councils appears to have been good.

First Nations generally consider that the program has benefitted their communities. From the few reserves visited in the case studies, it appears that the program was generally welcomed and that attitudes on preventing contamination were positive.

For First Nations stakeholders, the EIIRP is seen as an effective tool for determining health and safety risks and promptly remediating those contaminated sites that posed the greatest degree of risk. This has led to lower overall risks of contamination on reserves.

First Nations, in some instances, were unclear as to the requirement for specialist resources for assessing, testing and remediating contaminated sites on reserves. Some First Nations had expected to see more direct economic benefits accruing to them as a result of EIIRP activities carried out in their communities.

If the case studies are indicative, there is room for improving some regions' communications with First Nations. It would have helped to clarify the processes for undertaking the inventory, assessing sites, and cleaning up those that were found to be contaminated.

The EIIRP has shown that the most widespread and urgent environmental problems on reserve lands are those related, first, to hydrocarbon contamination of soil and, secondly, to waste disposal. In the absence of regulatory regimes, the department needs to take practical steps to address and manage these major environmental issues on reserve lands. It is recommended :

Recommendation 1 : That the Director, ENRD, develop a national framework to provide a common approach for regions to use in developing their fuel storage tank management strategies.

The EIIRP has also underscored the need for legislation to enforce environmental regulations. Bands have expressed concern about the inability of their by-laws, and the weak legal support offered by the department, to control third-party polluters and CP Holders. The EIIRP process uncovered certain weaknesses or gaps in some of the legislation applying to reserves. For instance, the IRWDR does not control third party polluters, especially CP Holders. There is currently no mechanism for controlling what happens with CP Holders on reserves. Amendments to existing legislation are needed to allow First Nations to enforce environmental standards on reserves more effectively. It is therefore recommended :

Recommendation 2 : That the Director, ENRD, support regions in developing their own waste management strategies. Using the national framework for Solid Waste Management as a standard, these strategies should address community awareness, construction and operating standards, training, inspection and monitoring, as well as the terms and conditions in leases and permits.

Effectiveness

How effective is the EIIRP at generating accurate, relevant and timely data about environmental issues on reserves?

The issues inventory : A key output of the EIIRP has been the EIIS—an automated index and computer database available to HQ and regions. This index contains summary descriptions, funding details, and tracking information on activities related to the each environmental issue.

There were some initial problems with the original design of the system, including that it was awkward to use, and it was of limited usefulness from a regional perspective. However, the new Windows-based version has facilitated entering data and accommodating regional needs better, especially as regards tracking expenditures and activities related to each issue.

The intent has been to develop a system that ensures the greatest degree of data consistency and congruency. The information in the EIIS can be consolidated at various levels to support informed decision-making as well as to ensure accountability for the use of funds.

Regional data records have identified and documented specific environmental issues on reserves. But it remains unclear if this data can be standardized so that national data would permit inter-departmental comparisons, and if data can be provided for more uniform standards of federal assessment and clean-up action regarding contaminated sites.

Conclusions :

The EIIS database has already proved its usefulness for identifying and documenting the number of contamination issues on reserves.

The IEPP's 'sunset' provisions raise concerns about the continued use and maintenance of the inventory database. The information in the EIIS database provides not only a 'snapshot' of baseline information, but also activity and funding information that requires continual updating. This data is important in that it can provide a historical perspective of what action has been taken on a particular contaminated site on a reserve.

However, unless kept up-to-date, the data in the inventory database will quickly become dated, thus ceasing to perform its vital function of keeping the department abreast of the environmental situation on reserves. Statutory obligations and the need for *due diligence* provide strong incentives to maintain the EIIS as an active database on environmental issues on reserves across Canada. It is therefore recommended :

Recommendation 3 : That the Director, ENRD, continue to maintain the EIIS database after March 31, 1997 as a tool to manage and monitor ongoing activities related to environmental issues on reserves. Regional environmental units will remain responsible for updating information on the EIIS;

Recommendation 4 : That the Director, ENRD, in cooperation with regional environment managers, explore the possibility of eventually transferring the EIIS database to tribal councils and First Nations for their use.

Vulnerability

To what extent has the EIIRP reduced DIAND's vulnerability to charges under the *Canadian Environmental Protection Act* (CEPA) and the *Fisheries Act*?

The EIIRP has helped the department meet its legal obligations under federal environmental legislation, thereby reducing the risk of being charged. It has contributed to meeting the departmental obligations with respect to *due diligence* by remediating those on-reserve sites that pose risks to health and safety. The health and safety of First Nations on reserves is being enhanced from an environmental standpoint. There remain certain unresolved situations that have already been noted—including some high-priority sites that have not yet been remediated, and non-compliant CP Holders.

The department and its officials are well aware of their obligation to comply with various pieces of federal environmental legislation, policies and requirements. For instance, senior HQ executives realized that they could become personally liable if breaches of environmental legislation resulted from their actions. In fact, this was a key motivation for instituting the EIIRP process.

Assessing risk and remedial action : To determine the extent and severity of any environmental problem in terms of its overall risk, the regions used the National Classification System for Contaminated Sites and the Interim Canadian Environmental Quality Criteria for Contaminated Sites according to the CCME Guidelines, 1992.

DIAND also developed the Risk Assessment Ranking Matrix as a method for setting priorities for follow-up action at contaminated sites, thereby ensuring that the most urgent problems received the quickest attention. Without this management framework, problems could arise due to a lack of priorities regarding funding—which would have implications for showing *due diligence*. The framework has been used by regions to identify remedial action funding priorities. It ensures that all risk factors have been considered and that each one has been appropriately weighted in terms of legal, health and safety requirements.

Standards and policies : There have been ongoing efforts to develop much-needed policies and procedures to clarify the level of remedial action that should be undertaken for specific sites. While the Department, through the EIIRP, has now decreased its risk of being charged under relevant environmental legislation, specific guidelines for assessing risk and clarifying the level and type of remedial action remain to be developed. Standards for inspection and testing also need to be strengthened and made uniform nationally.

Expertise levels : All regions have indicated that the expertise required to carry out the EIIRP is

available within each region. Furthermore, appropriate expertise is available either in-house or from other sources (e.g., Technical Services, other federal departments, consultants, etc.). Environmental engineering is a fairly new discipline, and only a few specialist consulting engineering firms focus on this area. Should the program be extended or maintained in some new form, its continued success will depend in large part on having access to this specialized expertise.

Conclusions :

Any consideration of the department's vulnerability to being charged under environmental legislation, and of the EIIRP's overall effectiveness, must address the matter of its demise or 'sunsetting.' DIAND's overall legal liability may have been reduced as a result of activities carried out under the EIIRP, but it is unlikely that DIAND or First Nations will have the necessary funds to remediate all contaminated sites before the end of March 31, 1997.

Moreover, environmental issues related to contamination will continue to crop up. As a result, the department's legal vulnerability remains—albeit with exposure to fewer issues than before.

Despite the absence of regulatory regimes, DIAND must address the management of environmental issues on reserve lands more effectively. Regions have normally followed standardized formats, based on generally accepted standards for environmental investigations, to identify, test and report on the issues they examine. Currently, no federal minimum standards of *due diligence* exist to determine the potential risks posed by the contamination of federal lands and the appropriate remedial action required.

In the absence of more detailed guidelines or criteria on standards for remedial action, it is hard to determine how efficiently funds have been spent. Given the pioneering aspects of these remedial initiatives, gaps in remedial standards must be recognized. For instance, remediating to 'residential' standards is far more costly than cleaning up to 'industrial' standards. The Department is currently updating its remediation standards and using its priority ranking system.

Better national standards are therefore required in order to establish consistency in ranking priorities and determining the level of the remedial action that is needed to address environmental problems. This has a direct bearing on the final costs of clean-ups. It is therefore recommended :

Recommendation 5 : That the Director, ENRD, in cooperation with First Nation communities, develop a joint action plan to establish uniform and consistent environmental standards and strategies for managing contaminated sites on reserve. It should address any weaknesses or gaps in legislation applying to reserves.

Impact

What impact, both intended and unintended, has resulted from the EIIRP?

There seems to be general agreement that the EIIRP has had a significant positive impact in several areas and has had a beneficial impact on First Nations overall. High priority sites are being remediated, pollution sources are being documented, and awareness has been raised within First Nation communities that will hopefully contribute to prevention.

Environmental training of First Nation members has raised awareness and contributed to searching for practical and cost-beneficial ways to prevent future contamination. Band councils and band members have been made aware of the effects of environmental pollution and contamination and the underlying causes and effects have been discussed with them.

Developing partnerships : Aside from improving the environmental quality on reserves in terms of health and safety, there have been opportunities for economic development for First Nations. Some tribal councils, bands and First Nation individuals have benefitted economically from the program by participating in assessment and remedial activities.

Conclusions :

One of the unintended results of initiating the EIIRP was that the department opened itself up to a greater level of liability. Through the EIIRP process, the department uncovered and became aware of environmental hazards and concerns it had not previously been aware of. As a consequence, it was obligated to do something about these contamination problems or face legal liability if it did not.

Rationale

In the context of current departmental objectives, is there a continuing rationale for the program, and if so, should the program be extended or expanded?

Both the Government of Canada, in its *Guide to Green Government*, and the Minister of DIAND have emphasized a commitment to sound economic management through sustainable development and the preservation of Canada's environment.

The objectives of the EIIRP are in line with these goals, ensuring that reserves will be environmentally healthy and safe.

With the IEPP scheduled to 'sunset' or end on March 31, 1997, when the Green Plan's funding also ends, any continued funding will require departmental approval. The program should have the flexibility to accommodate additional post-Phase IV issues, and allow for developing specific assessment and remedial criteria and guidelines and for developing and administering specialized environmental training.

To complete the EIIRP effectively, all Phase III and remedial action on 'orphan' and high-risk sites needs to be satisfactorily completed. This will likely require the development of a strategy to assess and clean up the remaining contaminated sites after March 31, 1997.

A definitive resolution of the effectiveness of the program would require an examination of several relevant factors. These include : the extent and costs of the clean-ups already completed on reserve lands, improvements since the beginning of the program, the level of participation in prevention training, and the degree of capacity-building that has occurred since the inception of the EIIRP.

Since these requirements will remain outstanding when the IEPP is due to 'sunset,' it is recommended :

Recommendation 6 : That the Director, ENRD, prepare a report summarizing all projects undertaken with IEPP funding under its Environmental Issues Inventory and Remediation Plan (EIIRP).

The report should document the activities undertaken to date, including :

- costs of each Phase based on allocations and expenditures;
- environmental issues identified and actions taken on each one;
- costs of completing activities on remaining environmental issues;
- remedial and risk management options;
- recommendations for follow-up and maintaining the EII database.

In short, the report should provide a complete picture of environmental risks, costs and liability arising from contaminated sites on reserve lands, and provide management with options to address the remaining environmental issues on reserves.

Recommendation 7 : That the Assistant Deputy Minister, Lands and Trust Services (LTS), seek approval to extend the EIIRP to assess and clean up remaining contaminated sites after March 31, 1997, until all Phase III and remedial action on 'orphan' and high-risk sites are satisfactorily completed.

Continuing the EIIRP activities will ensure the momentum of remedial activities, the maintenance of the environmental issues inventory, and that monitoring continues until the risks are reduced to satisfactory levels.

Improvements

What improvements can be made to the implementation and coordination of the EIIRP, including increased opportunities for First Nations to become more directly involved in environmental management?

Some key areas for improvement and further refinement of the program are :

The further transfer of environmental responsibilities to First Nations has to be done gradually and according to the capacity and willingness of each First Nation to take on these functions and responsibilities. This should be actively pursued through a consultative process. It will mean, for example, determining the level at which First Nations should become involved (e.g., tribal council, community nominated representatives, etc.).

One of the negative results may be that raised expectations cannot always be met particularly if sufficient resources and training do not accompany the transfer of responsibilities. Therefore, adequate training and resources for capacity-building will need to be provided before any transfer does occur. The issue of DIAND's legal liability, in case of any transfer, will also need to be clarified and resolved.

As an initial, ad-hoc strategy to prevent the occurrence of certain environmental issues, the EIIRP embarked on a Community Preventative Training (CPT) program for First Nation individuals and communities. Its training stressed prevention and good management practices.

Departmental roles and responsibilities need to be clarified and defined regarding off-reserve activities affecting the interests of First Nations in remediation projects both on and off reserves. For example, how should unregulated off-reserve industrial developments with potential environmental effects on reserves be handled?

The role of provinces on reserves also needs to be clarified further—for instance, as to the application/enforcement of provincial environmental legislation on reserve lands. Furthermore, to prevent funding difficulties for DIAND, appropriate responses will need to be developed to take care of other departments' environmental requirements—such as Health Canada's concerns over water quality testing.

Training is a never ended activity. Despite the advances in capacity-building and training mentioned in this report, additional courses need to be developed to sensitize First Nations to environmental issues and provide training on remedial action and preventing future contamination.

Legislation to control contamination by third parties on reserves is weak. Legislation to control CP Holders who ignore environmental controls must be revised to enable Bands to apply sanctions.

Conclusions :

The EIIRP process has made it evident that mechanisms are needed to prevent future environmental problems. A well-designed Environmental Management System (EMS), implemented at the First Nation community level, could help to achieve this. It would provide First Nations with a framework to ensure that on-reserve operational activities and decision-making are undertaken in environmentally responsible ways.

Consistent with the federal policy of devolving responsibility and authority to First Nations, along with the initiatives towards self-government, an EMS can also help DIAND and the First Nation to define and understand clearly the roles and responsibilities for environmental protection of reserve lands.

It is therefore recommended :

Recommendation 8 : That the Director, ENRD, in cooperation with the Regional Environmental Managers (REMs) and First Nations, explore measures for preventing or minimizing adverse environmental effects from occurring in the future and by developing environmental capacity-building mechanisms within First Nation communities.

Quebec Case Study

Summary : Quebec Region - Conseil De La Nation Huronne-Wendat

Background :

The Huronne-Wendat (Wendake) First Nation is located at Loretteville, near Quebec City. It was established in 1649, when a group of Hurons moved from their traditional grounds in south-western Ontario to settle with the French near Quebec City.

Today the urban area of Quebec City has grown past the reserve. The reserve is relatively prosperous, including suburban-style housing and an industrial park. Wendake has a Huron population of 2,648 : 1,058 reside on the reserve, and 1,590 live off-reserve (1995 figures).

The environmental issues are characteristic of urban areas. Sewage, water and garbage disposal services are provided by the Quebec Urban Community.

Phase I :

The Phase I study of previous reports and information available in the department's records noted the following :

- a Health and Welfare Canada inspection of two woodworking plants in response to complaints about airborne pollution—specifically, dust;
- a study on new Quebec regulations about storing used tires; and
- a Health and Welfare Canada study on sanitary conditions, including water quality.

Phase II :

Part A of Phase II involved a visit in September 1992 which led to identifying the 6 following environmental issues :

1. Disused solid waste dump sites (three);
2. Used tire storage depot;
3. Used oil storage;
4. Dangerous materials storage (two);
5. Above ground storage tanks (five); and
6. Below ground storage tanks (four).

A number of factories in the industrial zone were also noted for investigation.

A $30,000 budget was provided for Phase II B, consisting of a more detailed study. The figure was reached based on the issues found in II A. The funds were transferred to the Huron-Wendat Nation band account, and DIAND provided the names of five consulting firms. The band sent requests for proposals to four of these firms. The department took part in opening the sealed bids in November 1993. The contract was awarded to ADS Groupe Conseil Inc., with the low bid of $17,080. The contract was entered into in January 1994, and was subsequently amended by the addition of $2,850, for a total contract of $19,930. The project started in the spring 1994, after the snow cover had melted.

The Huron-Wendat Nation was actively involved in the project. The lead contacts were Richard Picard and Elise Picard of the Health Department, and local knowledge was well used. A preliminary report was issued in June 1994. The band directed that certain issues be looked at in greater depth, and a final report was issued in September 1994.

The report was thorough, covering all the issues identified in the earlier phase, and it appears to be technically sound. Some issues raised by band members were not directly related to the Environmental Inventory, such as off-reserve sources of airborne pollution caused by the open-air burning of industrial waste, in particular from some of the woodworking plants in the industrial zone on the reserve. These were considered and referred to the appropriate agencies, *viz.*, Environment Canada or Environment Quebec.

Soil samples were taken from some of the dump and tank sites. The results of analysis were compared to the Canadian Council of Ministers of the Environment standards for traces of various elements. The report concluded that :

- The former dump sites posed no threat to health and safety. It was noted, however, that it seemed that one of these former dump sites had been used recently. It was recommended that the probable user be requested to use regular disposal services.

- The used tire depot conformed to the new, stricter Quebec regulations. Most tires were stored in closed containers and those stored in the open were neatly stacked and numbered significantly less than the 1,000-tire limit allowed by Quebec regulations. The depot was visited during the evaluation and the situation was confirmed.

- Some recommendations were made about improving the storage of used oil to reduce the risk of spills.

- The dangerous materials storage at Alignment Picard and Freins Gros-Louis posed no environmental risk; even so, some suggestions were made for improved procedures.

- Disposal of dangerous waste at Freins Gros-Louis was identified as a problem. Recommendations were made to improve handling.

- The analysis of the soil samples at the oil storage tank at the Freins Gros-Louis was found to exceed level C of the CCME guidelines. It was recommended that the underground storage tank be replaced, and that the soil contaminated to level C should be removed to an authorised treatment depot.

- The underground storage tanks at the band-operated gas station were identified as a potential problem. A gasoline spill occurred at the station in 1994. The gas tanks had been replaced in 1990. There was some concern that there could be some residual contamination from the old tanks. This issue was identified as a regional priority 2 for a more detailed study in Phase III of the Issues Inventory. There were also recommendations for improving simple monitoring procedures to identify any leakages, i.e., reconciling input of the gasoline with its output.

- Above-ground storage tanks were assessed not to be an environmental risk.

- It was recognised that the band's lack of specific environmental by-laws hindered enforcement. Recommendations were also made about other environmental concerns. For example, to solve the problem of open-air burning of industrial waste in the residential area, it was recommended that wood also be burned on another location outside of residential areas.

Phase III :

The only issue identified for more in-depth investigation by the Phase II report was to analyse the soils at the band-operated service station. That study was initially estimated to cost $9,000.

Band Involvement :

The evaluation involved visiting the reserve. The band's Director of Health Services was very positive about the process for carrying out the inventory. Environmental issues, he stressed, cannot be looked at in isolation from issues such as economic and industrial development, training and education. He highlighted the band's need for the tools to carry out preventive measures, including for by-laws on environmental matters—to control open-air industrial waste burning, for example. He inquired about the linking and overlapping roles of the government departments involved in environmental matters, saying that the band was often unclear about who was responsible.

Some sites where issues had been identified were visited during the evaluation. The used tire depot was found to be well-organised, with most of the tires stored in closed containers and about 60 tires neatly stored in the open.

The Freins Gros-Louis was visited. The old underground tank had been removed and inspected, and the contaminated soil had been covered and placed at the back of the yard. The soil had not been removed because, under the polluter pay policy, it was the responsibility of the polluting business, if identified, to pay for the clean up. Mr. Gros-Louis was a small businessman who felt he could not afford to pay, and that in any case it should be the federal government's responsibility to pay for the removal because they had identified the problem. The band and the department were looking for a solution that would not establish precedents for other problem sites.

Overall Conclusions :

The environmental inventory at Wendake was carried out in a logical and thorough manner. The band's involvement was a very positive part of the process, enabling a more thorough inventory that made use of local knowledge. That involvement also effectively increased the band's awareness of environmental matters, which should have longer-term consequences on prevention. The results also include moves to put in place band environmental by-laws, and a demand for more training in environmental issues.

British Columbia Case Study

Summary : British Columbia Region — Fraser Valley (Kwantlen and Spuzzum Reserves)

Background :

B.C. reserves are generally small in both size and population, and they are often adjacent to suburban residential or industrial developments. Two Coast Salish reserves in the lower Fraser Valley of British Columbia were the subject of the case study in the B.C. Region : the Spuzzum and the Kwantlen Reserves. Only the latter site was actually inspected; Spuzzum representatives were interviewed by the consultants.

A slightly modified process was followed uniformly in the B.C. Region's reserves : Phase II involved a visual inspection alone, without testing, whereas Phase III was used to provide the testing as well as to remediate the priority sites.

Kwantlen :

The Kwantlen First Nation is located at Fort Langley, on 557 hectares consisting of 6 reserves, with a population of about 80 on reserve. Economic activities are fishing and farming; revenues are also derived from land leases. Some reserve land is on the Fraser River, where there is industrial pollution and agricultural run-off.

Phase I :

During the Phase I study, some basic information was obtained from DIAND records and from the Band Manager.

Phase II :

The environmental consultants contracted by this region made an inventory of issues about Kwantlen (Langley Indian Reserve #5) for Phase II. A total of 5 issues and risk assessments were identified with the help of site inspections :

		Risk Assessment
1.	Dumping at Residential Site	High
2.	Landfill	High
3.	Underground Storage Tanks	Medium
4.	Wood Waste	Low
5.	Above ground Storage Tanks	Medium

Problems included : leachate from wood waste (cedar sawdust is highly acidic) into the Fraser River; dumping assorted waste, sometimes by unknown third parties, such as old fuel storage tanks, old docks, automobile and construction waste; and contamination by spilled fuel-oil, both above and below ground.

Five issues were also identified at McMillan Island IR#6, and one at Whonnock IR#1.

Phase III :

Priority sites were selected for this phase for further investigation. The following results were gathered :

Two of the five sites at Kwantlen were identified as high risk, and are currently being investigated for remedial action.

One site is owned by a CP holder—a band member and elder. The council has had trouble getting him to stop dumping and burning noxious material. Two creeks that flow into the Fraser are visibly polluted. He gets income from this disposal, and is reluctant to comply.

The Band Manager informed the consultants that the Band has made a by-law on dumping that cannot be enforced : since the fine is only $100, it is being ignored. The Environmental Specialist has advised the Band about this, and the Band is now contacting the RCMP to enforce the by-law. The Fisheries Department took the holder to court for polluting the Fraser, but the case was thrown out on a technicality.

The consultants inspected the site adjacent to the Fraser River which was dumping at a residential site. Third parties had dumped various items, such as oil tanks and old docks onto this land. In addition, the Band member had raised the lot level by using sawdust mixed with topsoil. Further testing is needed before an estimate can be made for remedial action.

Another problem is dumping by unknown third parties, on the area of the reserve bordering the Lougheed Highway.

Spuzzum :

This reserve is on the west side of the Fraser River Valley Canyon, between Chilliwack and Kamloops, 40 km north of Hope, B.C. Economic activities are few and the land is too steep for agriculture; it has access to the main road, Highway #1. 40 band members live on 16 reserves covering 636 hectares, some directly bordering the steep canyon-like side of the Fraser Valley as it flows from the mountains, Cascade Mountain to the North and the Lillooet Range to the West. It has fuel storage tanks, septic tanks and a garbage disposal site (being remediated). Garbage is now being disposed by garbage contractors.

Phase I :

A general waste disposal site and an old logging maintenance area were identified through existing records for this phase's search for existing known issues.

Phase II :

The assessment of environmental issues through site inspections and assessing risks was the same at Spuzzum as at Kwantlen—namely, visual inspections and risk assessments were made, without testing.

The consultants noted oil contamination and possible ground water contamination of Spuzzum Creek resulting form the old site. The waste disposal site had been inactive since 1986, and its steep sides were showing signs of erosion, resulting in leaching into the Fraser River. This disposal site was deemed to have a high priority.

Phase III :

This phase, which requires selecting priority sites for further investigation, involved examining both sites mentioned in Phase I. The partial clean-up of the waste disposal site was witnessed by the team. All materiel had been recovered and sorted into metals, plastics, etc., and it was awaiting pick up. The steep slope from which the materiel had been removed by dragline still needed to be stabilized. The Band Manager said the Band welcomed the clean-up, but that many CP Holders' sites remain problematic.

The site will no longer be used for waste disposal, as garbage is now picked up and goes to the Hope town landfill. The Band felt that the single visit from environmental consultants was inadequate, and that both DIAND's and FNESS's interventions on the storage tanks were too slow in responding and remediating the problem.

They also noted that other Bands had only learnt of the EIIRP through them, not from DIAND.

Even so, they appreciated the work now being conducted on the reserve.

Overall Conclusions :

The study of these reserves made it clear that :

- bands were aware of most problem sites before the inventory was taken, and had been concerned about being unable to control CP Holders;
- all sites have been found and inventoried except old ones, where maps and visible evidence is lacking, and where only memories help to locate sites;
- priority or high risk sites had been assessed as such, and are now being remediated;
- while bands are supportive, CP Holders remain a problem since enforcement measures have little clout;
- these bands have been trained and sensitized about remediating and preventing further contamination;
- one band went so far as to state that it would add band funds to DIAND's contribution in order to help remediate these environmental problems.

The two sites examined and the issues that arise with them are typical of the B.C. Region — although there are only a small number of issues in each reserve, there are numerous small reserves. The sites' effect often goes beyond each reserve, sometimes in primarily due to their small size. They also affect other parties, and they are affected by parties bordering the reserve, especially in less remote reserves. In addition, CP Holders clearly constitute a problem, as environmental remediating will be difficult without better enforcement methods.

Other Materials

A : Glossary of Abbreviations

AES	Arctic Environmental Strategy
AST	Above Ground Storage Tanks
CCME	Canadian Council of Ministers of the Environment
CEAA	Canadian Environmental Assessment Act
CEPA	Canadian Environmental Protection Act
CP	Certificate of Possession (Holder of a lease on reserve land).
CPT	Community Prevention Training
EIIRP	Environmental Issues Inventory and Remediation Plan
EIIS	Environmental Issues Inventory System
EMIS	Environmental Management Information System
EMS	Environmental Management System
ENRD	Environment and Natural Resources Directorate
FNNES	First Nations Emergency Society in British Columbia.
ICEQCCS	Interim Canadian Environmental Quality Criteria for Contaminated Sites
IEAF	Indian Environmental Assistance Fund
IEPP	Indian Environmental Partnership Program
IRWDR	Indian Reserve Waste Disposal Regulations
NAP	Northern Affairs Program
NCSCS	National Classification System for Contaminated Sites of CCME
NCSRP	National Contaminated Sites Remediation Program
OEEA	Ontario Environmental Assessment Act
REM	Regional Environment Manager
RPS	Real Property Services (formerly the Technical Services for PublicWorks and Government Services Canada)
TDGA	Transport of Dangerous Goods Act
UST	Underground Storage Tank

B : Relevant Legislation, Regulations, and Guidelines

CEAA	*Canadian Environmental Assessment Act,* which replaced the *Environmental Assessment and Review Process* (EARP) in January 1995, outlines the responsibilities and procedures for the environmental assessment of projects involving the federal government.
CEPA	The *Canadian Environmental Protection Act.* The primary piece of federal legislation for protecting the environment and human health from risks associated with toxic substances.
EARP	The *Environmental Assessment & Review Process Order-in-Council.* The mechanism used by the federal government to assess the environmental and related socio-economic impact of proposed projects prior to implementing CEAA.
CCME	Canadian Council of Ministers of the Environment (Federal-Provincial) 1992 - risk categories definition National Classification System of CCME.
FA	*Fisheries Act.* Federal legislation that regulates all aspects of fisheries and fish habitat, including their protection from deleterious substances. Applies to all fish- bearing waters, both inland and offshore.
Indian Act	As holder of title to reserved lands for the use and benefit of Indians, the Government may face liability due to contamination on reserves, and must act with *due diligence* in trying prevent risk of harm.
IRWDR	*Indian Reserve Waste Disposal Regulations*
Environment Act - Green Plan	NCSRP, National Contaminated Sites Remediation Program - part of Environment Canada's Green Plan.
Provincial Environmental Legislation	Each DIAND region is aware of and may take provincial regulations into account in remedial action; however not all provinces have legislation which may be applicable.
TGDA	*Transportation of Dangerous Goods Act.* Federal legislation containing regulations that control the international and interprovincial transportation of nine classes of dangerous goods.

C : Documents Cited

1. Briefing Note for Minister (Secret)

2. *Indian Environmental Partnership Program (IEPP)*, Memo to Cabinet (Secret).

3. Various Information Sheets/Background, etc.

4. TB Submission, final approval Feb 17, 1994 (Annex A Project Eligibility and Funding Criteria).

5. *Audit of the Environmental Management Function*, Indian & Inuit Affairs Program Component, Lands & Trust Services, DAEB 92/01-2, June 1993.

6. *A Profile on Auditing Environmental Management Issues* in DIAND, DAB July 1993

7. Regional Environmental Baseline Studies, 1993/94, Compliance & Review, ENRD, Lands & Trust Services.

8. Briefing Paper on Regional Environmental Baseline Studies, August 15, 1994.

9. Memo to Regional Environmental Managers, Lands & Trusts Services re : Environmental Issues Inventory System (EIIS), August 31, 1994.

10. EIIS National Issue Report as at March 23, 1995.

11. Memo to DG, Lands & Environment and to ADM re inventory of reserves with legal, health and safety concerns (Secret), February 12,1993.

12. Environmental Issues Inventory, Status Report, June 30,1993.

13. Letter to Regulatory Risk Management Committee re development of communications guidelines, November 15, 1994.

14. Various Questions-and-Answer sheets on the Environmental Issues Inventory and Briefing note to Minister, June 29, 1994.

15. Review of draft Environmental Assessment Act (Bill C-13) Jan 20, 1993.

16. Slides on Environmental Protection Process.

17. EIIS User Reference Guide and Instructor Training Guide.

18. "Feds Propose New Environmental Law," by Mrs Noah Black, *Windspeaker*, March 1996, page 16.

19. Environmental Priority Setting Framework, Coopers & Lybrand Consulting Group for ENRD, June 1994.

D : Evaluation Questionnaire

PROGRAM EVALUATION OF THE ENVIRONMENTAL ISSUES
INVENTORY & REMEDIATION PLAN (EIIRP)

Interview Guide (for interviewers) : The questions asked often depend on the person being interviewed, whether the individual(s) is from DIAND HQ or region, from other government departments [OGDs], or from a First Nation. Points made in square brackets below suggest the material interviewers should try to obtain from subjects.

Introduction for interviewees : Pearmain Partners, a management consultant firm, has been contracted to evaluate the EIIRP portion of the Indian Environmental Partnership Program (IEPP), on behalf of DIAND's Departmental Audit and Evaluation Branch. The Project Authority for this study is Robert Bellehumeur, who can be reached at (819) 994-1357.

As you may know, program evaluations are undertaken to establish if the original objectives of a program have been carried out, the effect program activities have had, and if programs should be continued or modified.

Your input to this process is very important. Please remember : this evaluation is not an audit; its purpose is to gather information for the program manager and Deputy Minister to use in future program planning.

Q. 1 Briefly relate your involvement with EIIRP.

[Overview, especially if interviewee is a stakeholder.]

Q. 2 What do you understand as the goals and objectives of the EIIRP?

[This includes describing the program, the rationale for its implementation, the target or intended audience, the specific activities, and the output.]

Q. 3 Was the EIIRP an appropriate response to the intent of the program's objectives? If you do not think it was appropriate, how would you see this changed?

In the context of current departmental objectives, what is the rationale for the program, and is there a continuing rationale for each of them, and if so, should these be extended and/or expanded?

[The sub-question includes the rationale for developing the program, and the decision to extend or expand it based on relevant information. The question should lead the interviewee to appreciate that it is appropriate to continue delivering the program, and the conditions needed to increase its efficiency and effectiveness at the lowest costs.]

Q. 4 To what extent are the target audiences—that is, the First Nations, as regards their environment, and the department (DIAND) in terms of its statutory obligations—clearly and appropriately defined?

[The programs are targeted at both the departmental officials with respect to their obligations and Aboriginal peoples in relation to the environmental quality on reserves.]

Q. 5 What activities (inputs) have you undertaken in respect to EIIRP?

[Description of magnitude of the operation in which interviewee was involved]

Q. 6 What do you see as the outputs of the program ?

How effective is the EIIRP at generating accurate, relevant and timely data about significant environmental problems on reserve lands?

To what extent has the program reduced DIAND's vulnerability to charges under CEPA or the *Fisheries Act*?

Q. 7 How have the risks in both ensuring that all of the environmental problems have been inventoried and properly assessed—in terms of quantifying the risks to health and safety, etc.—been ascertained, and has this been realistic?

[This issue calls for an analysis of the legal background, a determination of the basis for developing the inventory, the risk analysis model used to assess the levels of risk of each environmental issue, and the level of expertise in collecting the data.]

Q. 8 If you were asked to suggest items that demonstrate the program's success, what measures would you detail?

Q. 9 What data is needed that would support theses, especially that would show the status at the program's inception and the change that is apparent today, after the program has been in place?

Q. 10 What impact, both intended and unintended, has resulted from the EIIRP?

[The impact asked about includes improving the environmental quality on reserves, with particular attention to health and safety, and enhancing economic development opportunities for First Nations.]

[This question calls for analyzing the extent and costs of clean-ups undertaken on reserved lands, improvements since the beginning of the program, the extent of prevention, training, and the additional capacity for prevention built into the reserves, or to enhance the economic potential of First Nations as a result of the program.]

Q. 11 What impact or effect(s) that was expected has <u>not</u> yet occurred? Do you think any of these expected effects are still likely to occur?

Q. 12 How can the program, as well as how it is implemented and coordinated, be improved—including by increasing opportunities for First Nations to become more directly involved in environmental management?

[This question calls for analyzing the current state of devolution, and the upcoming plan to transfer responsibilities to Aboriginal communities. The amount of capacity-building required to reach an acceptable level of autonomy in managing the environment should be rated. Finally, this question requires an analysis of proposed changes to regulations.]

[Interviewer should seek information on : assessing risks, recognizing other issues (e.g., those with an impact beyond or 'exogenous' to the reserve), training and capabilities of First Nations, support by DIAND and OGDs, the Band's role in preventing future problems, etc.

Q. 13 Are there any other issues or points that you would like to bring up on the subject of the environment with relevance to First Nations?

Thank you for your time and interest.

Terms of Reference

TERMS OF REFERENCE

THE EVALUATION OF THE INDIAN ENVIRONMENTAL PARTNERSHIP PROGRAM (IEPP)

Purpose

To provide Treasury Board with an independent Management and Operational Review of the IEPP by March 31, 1996 in accordance with the Project Eligibility And Funding Criteria (Annex A, Supplementary Estimates, 1993-1994).

To that effect, an evaluation will be conducted to measure the overall effectiveness of the program in improving environmental quality on reserves with respect to contaminated sites and building environmental partnership with First Nations.

Background

On June 1, 1993, cabinet approved an IEPP with two components. 1) an **Environmental Issues Inventory (EII)**, and **Remediation Plan**; and 2) an **Indian Environmental Assistance Fund (IEAF)**.

The IEPP is designed to assist DIAND in identifying and remediating environmental problems affecting the health and safety of reserve residents through the EII and Remediation Plan. The IEAF is the mechanism to support First Nations in participating in the pre-panel environmental assessment processes for large projects off reserve. Their participation is intended to add a traditional knowledge component and environmental and cultural values to the other economic factors.

The IEPP initiative focus on meeting the federal government's legal obligations under the *Canadian Environmental Protection Act (CEPA),* the *Fisheries Act, Due Diligence*, and other related legislations. Co-ordination with other departments such as DOE and Health Canada should ensure the most effective and efficient use of resources.

The EII is divided into four phases : a) an examination of all available records on reserve activities; b) a visit to each inhabited reserve by a team of specialists chosen as a result of the record examination, with initial testing of any suspected contaminated sites; c) in-depth testing of sites found to be contaminated, with options for follow-up actions, and d) the preparation of a final report which would indicate long-term follow-up at contaminated sites, with costing.

.../2

Main Issues

1. What is the profile of the IEPP (ie : a description of the program, rationale, targets, activities, and output)?

2. In the context of current departmental objectives, is there a continuing rationale for the program, and if so, should the program be extended and/or expanded?

3. How effective is the EII at generating accurate, relevant and timely data to achieve the program objective? This encompasses the extent to which the department has reduced its vulnerability to CEPA, Fisheries Act, and to Due Diligence.

4. What impacts, both intended and unintended have occurred as a result of the IEPP? This includes the improvement of the environmental quality on reserves with particular attention to health and safety, and enhancing economic development opportunities for First Nations.

5. What improvements\alternatives can be made to the program and its implementation and coordination, including increasing opportunities for First Nations to become more directly involved in environmental management?

Scope

The evaluation will focus on the overall effectiveness of the IEPP and its components, areas for improvements, its contribution to Due Diligence, as well as what intended and unintended impacts have occurred since its inception.

Approach

The study will be conducted under the direction of the Departmental Audit & Evaluation Branch (DAEB), with the help of consultants, with the participation of the Environment and Natural Resources Directorate (ENRD) and in consultation with an advisory committee of five/six members.

The advisory committee will be chaired by a representative of the DAEB and will be composed of representatives from the program headquarters, two/three regional offices, and two First Nations representatives.

.../3

The project will be conducted by using a flexible methodology exploiting multiple lines of evidence. This includes in-person and telephone interviews with First-Nations, Departmental personnel at headquarters and in three regions (Tentatively Quebec, Manitoba, and Saskatchewan) and other federal representatives. Individual and group interviews will be complemented by document analysis and an extensive review of the data-base. Two or three experiences of First Nations who have participated in the program will also be examined.

Schedule And Costs

The evaluation study will begin in June 1995, and a first draft report will be completed by March 31, 1996. The consulting budget is estimated at $85,000 to be equally shared by DAEB and ENRD.

Approved by :

Wendy F. Porteous
Assistant Deputy Minister
Lands and Trust Services

Action Plan

AUDIT AND EVALUATION / VERIFICATION INTERNE ET ÉVALUATION

REQUEST FOR ACTION PLAN / DEMANDE DE PLAN D'ACTION

PROJECT / PROJET : 95/08
DATE SENT / DATE D'ENVOI : 97.02.20
DATE DUE / ÉCHÉANCE : 97.03.03

PROJECT TITLE / TITRE DU PROJET : PROGRAM EVALUATION OF THE ENVIRONMENTAL ISSUES INVENTORY AND REMEDIATION PLAN (EIIRP)

REGION OR BRANCH / RÉGION OU DIRECTION GÉNÉRALE : LANDS AND TRUST SERVICES - ENVIRONMENT AND NATURAL RESOURCES DIRECTORATE

(1) RECOMMENDATIONS / RECOMMANDATIONS	(2) REPORT / RAPPORT PAGE NO.	(3) ACTION PLAN / PLAN D'ACTION (If space provided is insufficient please continue on blank sheet. / Si vous manquez d'espace, veuillez continuer sur une page blanche.)	(4) RESPONSIBLE MANAGER / GESTIONNAIRE RESPONSABLE (TITLE / TITRE)	(5) PLANNED COMPLETION DATE / DATE PREVUE DE MISE EN OEUVRE
1. The Director of the Environment and Natural Resources Directorate (ENRD) develop a national framework to provide a common approach for regions to use in developing their fuel storage tank management strategies.	20	1 Development of a national Storage Tank System Management Framework (STMF). (Status : Completed and signed-off by the Assistant Deputy Minister, Lands and Trust Services on January 22, 1997.)	Director, ENRD	97.01.22
		2 As part of implementing the STMF, regions are to conduct an inventory to register all on-reserve fuel storage tanks owned and/or operated by DIAND, First Nations and thrid parties.		97.12.31
		3 To assist in the registration of federal fuel storage tanks on reserves, a four-day training course is to be made available to those who will be registering on-reserve tanks. (Status : Pilot training course completed February 13, 1997; training course material to be finalized by April 1997; and training to be available to regions during May and June 1997.)		97.06.30
		4 Regions to evaluate their fuel tank inventory and develop a multi-year strategy to address fuel tank management. Regions to have fuel tank management plans in place by April 1, 1998.		98.04.01
2. The Director, ENRD, support regions in developing their own waste management strategies. Using the national framework for Solid Waste Management as a standard, these strategies should address community awareness, construction and operating standards, training, inspection and monitoring, as well as the terms and conditions in leases and permits.	20	1 Regions were to develop Regional Waste Management Plans and indicate how they would implement their strategies by April 1, 1996. (Status : As of February 1997, all but one region have developed regional waste management plans.)	Director, ENRD	97.04.01
		2 Implement the Indian Reserve Waste Disposal Regulations (IRWDR) on an interim basis. (Ongoing and as required.)		97.04.01
		3 Review and amend the IRWDR to increase the penalty to $5,000 and the term of a permit to five years. (Status : To be undertaken over the next two years.)		99.04.01
		4 ENRD, in cooperation with regions and Frist Nations, will seek to develop a waste regulation under the revised Canadian Environmental Protection Act. (Status : To be undertaken over the next five years.)		02.04.01

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3. The Director, ENRD, continue to maintain the Environmental Issues Inventory System (EIIS) database after March 31, 1997 as a tool to manage and monitor ongoing activities related to environmental issues on reserves. Regional environmental units will remain responsible for updating information on the EIIS.	21	1 Regional environmental units will continue to update data and information on the Environmental Issues Inventory System (EIIS) database. (Ongoing)	Director, ENRD	97.03.31
4. The Director, ENRD, in cooperation with regional environment managers, explore the possibility of eventually transferring the EIIS database to tribal councils and First Nations for their use.	22	1 In cooperation with Regional Environmental Managers (REMs), produce options for the transfer of the EIIS database to Tribal Councils and First Nations for their use. (Status : Develop recommendations on transfer of the EIIS by march 31, 1998.)	Director, ENRD	98.03.31
5. The Director, ENRD, in cooperation with First Nation communities, develop a joint action plan to establish uniform and consistent environmental standards and strategies for managing contaminated sites on reserve. It should address any weaknesses or gaps in legislation applying to reserves.	23	1 A joint HQ/regional committee develop an action plan for establishing environmental standards and "best practices" for managing contamined sites on reserve. (Status : Complete action plan by December 31, 1997) 2 Participate in the federal Interdepartmental Contamined Sites Management Working Group. (Ongoing)	Director, ENRD	97.12.31
6. The Director, ENRD, prepare a report summarizing all projects undertaken with Indian Environmental Partnership Program (IEPP) funding under its Environmental Issues Inventory and Remediation Plan (EIIRP).	25	1 ENRD staff to conduct review with regional environment managers on past EIIRP activities and to address any operational and follow-up issues. 2 Prepare a report on the EIIRP covering activities underatken over the past five years with options and recommendations for future funding of contaminated sites on reserve.	Director, ENRD	97.03.31 97.09.30
7. The Assistant Deputy Minister, Lands and Trust Services (LTS), seek approval to extend the EIIRP to assess and clean up remaining contaminated sites after March 31, 1997, until all Phase III and remedial action on 'orphan' and high-risk sites are satisfactorily completed.	25	1 $17.0 million is to be made available to carry on EIIRP activities in 1997-1998. (Status : Allocate available funding to regions based on priorities and eligible requests.) 2 REMs and ENRD will hold a national meeting to discuss future direction and follow-up of the EIIRP. (Status : Hold national REMs/ENRD meeting in the spring of 1997.)	ADM, LTS	97.04.01 97.06.01

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8. The Director, ENRD, in cooperation with the Regional Environmental Managers (REMs) and First Nations, explore measures for preventing or minimizing adverse environmental effects from occurring in the future and develop environmental capacity-building mechanisms within First Nation communities.	27	1 Develop and fund environmental preventive training for First nations participants. (Ongoing) 2 Develop and fund proposals for Environmental Management Systems (EMS) for implementation at the First Nation level.	Director, ENRD	97.04.01 97.04.01